



CITY OF RICHMOND
DEPARTMENT OF PUBLIC UTILITIES



Submit report to:
City of Richmond Stormwater Utility
730 East Broad St., 6th Floor
Richmond, VA 23219
Attn: Credit Applications

City of Richmond Stormwater Utility
Annual BMP Operation & Maintenance Inspection for Infiltration Practices
Due Every August 1st

Owner Name:			
Property Address: Street: City: Zip code:			
Date BMP placed in service:			
Site plan/permit number:		As-built plans available:	Y N
Date of Inspection:		Date of Last Inspection:	
Phone Number:		Email address:	
Check all that apply: Type of Infiltration: <input type="checkbox"/> Basin <input type="checkbox"/> Trench <input type="checkbox"/> Permeable Pavement			
Facility Location:	Filtration Media:	Type of Pretreatment:	
<input type="checkbox"/> Surface	<input type="checkbox"/> No filtration media (e.g. dry well)	<input type="checkbox"/> Sediment forebay (above ground)	
<input type="checkbox"/> Underground	<input type="checkbox"/> Sand	<input type="checkbox"/> Sedimentation chamber	
	<input type="checkbox"/> Bioretention soil	<input type="checkbox"/> Grass channel	
Hydraulic configuration:	<input type="checkbox"/> Peat	<input type="checkbox"/> Grass filter strip	
<input type="checkbox"/> On-line facility	<input type="checkbox"/> Other:	<input type="checkbox"/> Plunge pool	
<input type="checkbox"/> Off-line facility		<input type="checkbox"/> Stone diaphragm	

Checklist—Virginia Stormwater Management Handbook, chapter 9

BMP Element	Frequency	Problem	Yes or No?	Corrective Action
Contributing Drainage Area	On-going	Excessive trash/debris		
		Bare exposed soil		
		Evidence of erosion		
		Excessive landscape waste/yard clippings		
Pretreatment	On-going	Maintenance access to pretreatment facility		
		Excessive trash/debris/sediment		
		Evidence of clogging		
		Evidence of erosion		
		Evidence of standing water; ponding, noticeable odors, water stains, presence of algae or floating aquatic vegetation		

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BMP Element	Frequency	Problem	Yes or No?	Corrective Action
Pretreatment	On-going	Dead vegetation, exposed soil		
Inlets	On-going	Inlets provide stable conveyance into system		
		Excessive trash/debris/sediment accumulation at inlet		
		Evidence of erosion at/around inlet		
Downspout	Twice per year	Flow of stormwater is impeded to the practice		Debris and damaged pipe shall be repaired upon discovery.
Basin inlet	Twice per year	Stormwater flow to the vegetated basin is restricted. Weedy growth on rock surfaces might indicate sediment deposition or clogging.		Sources of erosion shall be identified and controlled when native soil is exposed or erosion channels are present. Inlet shall be cleared when conveyance capacity is plugged. Rock splash pads shall be replenished to prevent erosion.
Filter Media	Annually	Stormwater does not percolate uniformly through the planter. Water remains 48 hours after storm.		Filter media may need to be raked, excavated and cleaned, or gravel/soil shall be replaced to correct problem. Holes that are not consistent with the design and allow water to flow directly through the planter to the ground shall be plugged. Sources of possible clogging shall be identified and corrected.
		Sediment/debris accumulation is more than 4 inches thick or so thick as to damage or kill vegetation.		Remove by hand with minimum damage to vegetation using proper erosion control measures. Litter and debris shall be removed routinely and upon discovery.
Planter Reservoir	Annually	Element is unable to receive/detain stormwater prior to infiltration. Water does not drain from reservoir within 3-4 hours of storm event.		Sources of clogging shall be identified and corrected. Topsoil may need to be amended with sand or replaced altogether.
Planter	Twice per year	Structural deficiencies in the planter including rot, cracks, and failure are present. Planter is unable to contain the filter media/vegetation.		Repair as necessary.
Embankment, Dikes, Berms and Side slopes	Annually	Water is not retained in the infiltration basin.		Slopes shall immediately be stabilized using appropriate erosion control measures when soil is exposed/flow channels are forming. Sources of erosion damage shall be identified and controlled.
Overflow or Emergency Spillways	Twice per year	Pipe does not successfully carry excess water to an approved receiving system.		Overflow pipe shall be cleared of sediment and debris when 50% of the conveyance capacity is plugged. Damaged pipes shall be repaired or replaced upon discovery.

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BMP Element	Frequency	Problem	Yes or No?	Corrective Action
Overflow or Emergency Spillways	Twice per year	The reservoir does not perform as per specifications.		Overflow shall be cleared when 25% of the conveyance capacity is plugged. Sources of erosion damage shall be identified and controlled when soil is exposed. Rocks or other armament shall be replaced when only one layer of rock exists.
Vegetation	Monthly	Vegetation is not providing adequate filtering or is unable to protect underlying soils from erosion.		Mulch shall be replenished at least annually. Vegetation shall be replaced within a specific timeframe, e.g. three months, or immediately if required to maintain cover density and control erosion where soils are exposed.
		Nearby plants unrelated to the practice are interfering with the BMPs effectiveness.		Vegetation, large shrubs or trees that limit access or interfere with planter operation shall be pruned or removed. Fallen leaves and debris from deciduous plant foliage shall be raked and removed. Invasive vegetation contributing up to 25% of vegetation of all species shall be removed and replaced. Dead vegetation shall be removed to maintain less than 10% of area coverage or when planter function is impaired.
		Grass within practice is overgrown.		Grass shall be mowed to 4 –9 inches high and grass clippings shall be removed.
		Vegetative quality of the adjacent grass buffer is poor.		Spot reseed if cover is less than 90%.
		Plant composition consistent with approved plans.		
		Presence of invasive species/weeds.		
		Dead vegetation/exposed soil.		
Observation Well	Every 2 years	Condition of element is poor.		Replace observation well if needed and make sure it is still capped.
Sediment/debris Management	Annually	The capacity volume of the infiltration basin is compromised by sedimentation. Gauges located at the opposite ends of the basin indicate too much debris.		Sediment and debris exceeding 4" in depth shall be removed every 2—5 years or sooner if performance is affected. Restricted sources of sediment and debris shall be identified and prevented.
Underdrain	Every 5—7 years	The draw down rate should be measured at the observation well for three days following a storm event in excess of 0.5 inches in depth. If standing water is still observed after 48 hours, this is a clear sign that clogging is a problem.		Immediately clear debris from underdrain. It may need to be replaced.

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BMP Element	Frequency	Problem	Yes or No?	Corrective Action
Overall	Annually	Access to the stormwater planter is unsafe and inefficient. Egress and ingress routes are not maintained to design standards. Roadways are unable to accommodate size and weight of vehicles.		Obstacles preventing maintenance personnel and/or equipment access to the stormwater planter shall be removed. Gravel or ground cover shall be added if erosion occurs, e.g. due to vehicular or pedestrian traffic.
		Insects and rodents are harbored in the stormwater planter		Pest control measures shall be taken when insects/rodents are found to be present. If sprays are considered, then a mosquito larvicide, such as Bacillus thurengensis or Altoside formulations can be applied only if absolutely necessary and only by a licensed individual or contractor. Holes in the ground located around the stormwater planters shall be filled and compacted.
Outlet	On-going	Outlets provide stable conveyance out of facility		
		Excessive trash/debris/sediment accumulation at inlet		
		Evidence of erosion at/around inlet		
Overall	On-going	Maintenance access to facility		
		Condition of structural components		
		Condition of hydraulic components		
		Excessive trash/debris/sediment		
		Evidences of erosion		
		Evidence of oil/chemical accumulation		
		Evidence of standing water; ponding, noticeable odors, water stains, presence of algae or floating aquatic vegetation		
		Complaints from local residents		
		Mosquito proliferation		
Encroachment on facility or easement by buildings or other structures				